

# Bottom-up Reuse Guidelines: Intellectual Property

## Bottom-Up Reuse Guidelines: Intellectual Property Rights Issues for Software Reuse

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## Intellectual Property Rights for Reuse

An understanding of intellectual property rights issues can facilitate software reuse by reducing ambiguity regarding the permissible use of software created by others. Similarly, promoting knowledge of the intellectual property rights associated with particular software also offers benefits for potential reuse. For example, if potential users of software recognize that the software is open source, then they might consider contributing to the development and improvement of that software (see Open Source Initiative). Furthermore, understanding intellectual property rights issues associated with other types of intellectual assets produced by the scientific community can contribute to collaboration and progress in achieving scientific objectives (see Science Commons).

- Intellectual property refers to the "expression of original ideas" in works, including software, documentation, and procedures (see United States Copyright Office).
- Software and related intellectual property assets are owned by the authors, or their employers in "work for hire" situations.
- Intellectual property rights protect asset owners with rules for "using" intellectual property assets.
- Intellectual property rights are protected by laws and include patent, trademark, design, trade secret, and copyright laws.
- Copyright can enable or limit reuse and refers to the right to reproduce, prepare derivative forms, distribute, perform, or display a work of intellectual property.

## Reuse Stakeholders Need to Understand Intellectual Property Rights

The "Stakeholders" are defined here as authors, distributors and publishers, and potential users, and, where applicable, their employers. Increasing understanding of intellectual property issues may help software reuse stakeholders to explore ways of addressing any concerns that they might have regarding software reuse. Stakeholders who believe that their interests are not being addressed appropriately might make decisions that do not necessarily promote software reuse.

- Authors concerned about the loss of intellectual property rights may decide not to make their software available for reuse.
  - Potential users need to know the intellectual property rights to make a decision on whether to reuse software.
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## Using Intellectual Property Rights to Foster Software Reuse

Formalizing intellectual property rights can foster software reuse among various stakeholders and protect the interests of each party. It can provide a way for stakeholders to identify the rights associated with particular software and communicate those rights with other stakeholders and interested parties so that each can determine whether the rights that are associated with the software afford the reuse that is envisioned. Software owners who employ intellectual property licenses to enable reuse of their software recommend the following practices for others who want to promote the reuse of their software.

- Adopt a pre-written easily recognizable license that encourages software reuse and enhancement (see References).
- Allow execution, copying, modifications, and redistribution (see Creative Commons).
- require license and attribution to stay with software.
- Attach a license to the resource that allows free reuse with limited restrictions.
- Include text of license within the source code.
- Include a simple explanation of rights for the lay person.

Disclaimer: The opinions of the authors are meant to promote discussion and should not be considered legal advice, which may be sought from an attorney.

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## References

- Apache Software Foundation <http://www.apache.org/licenses/>
- BSD License <http://www.freebsd.org/copyright/license.html>
- Creative Commons <http://www.creativecommons.org>
- Gnu Public Licenses (GPL & LGPL) <http://www.gnu.org>
- NASA Open Source Agreement <http://www.opensource.org/licenses/nasa1.3.php>
- Science Commons <http://www.sciencecommons.org/>
- Open Source Initiative <http://www.opensource.org>
- United States Copyright Office <http://www.copyright.gov>